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ABSTRACT OF THE DISCLOSURE

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10 A method for reading a radiation image from a stim-
mulable phosphor sheet composed of a substrate and a
stimulable phosphor layer containing a latent radiation
image by means of a radiation image-reading means having
a stimulating light-applying unit and a stimulated emis-
sion-collecting unit having a lens and a stimulated emis-
sion-receiving plane, which is performed by the steps of
applying a stimulating light onto the phosphor layer
under the condition that the phosphor sheet moves along
15 its sheet plane in relation to the stimulated emission-
collecting unit; collecting a stimulated emission emit-
ting from the area onto which the stimulating light is
applied on the emission-receiving plane through the lens;
and photoelectrically converting the collected emission
20 into electric signals in the stimulated emission-collect-
ing unit, is improved by moving the stimutable phosphor
sheet in relation to the emission-collecting unit under
the condition that the stimulating light-applied area of
the stimutable phosphor layer is kept apart from the
25 center of the emission-receiving plane with a space in
the range defined by a combination of a reference space
and a focal depth of the lens, in which the reference
space is defined by a length at which the stimulated
emission emitting from the phosphor layer focuses on the
30 emission-receiving plane after passing through the lens.